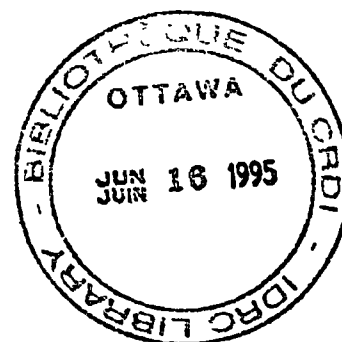


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**MODES OF COLLABORATION AND THE DEGREE OF COOPERATIVITY
IN COOPERATIVE PROGRAM PROJECTS
SEPTEMBER, 1986**

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MODES OF COLLABORATION AND THE DEGREE OF COOPERATIVITY IN COOPERATIVE PROGRAM PROJECTS

PURPOSE

To review, classify and define the different modes of collaboration being pursued within the cooperative program funded projects from 1981 to July 1986, inclusive.

INTRODUCTION

During a review of the projects summaries of the 179 projects funded by the Co-operative Program Division, it became clear that the projects represented a variety of types of research activity and modes of collaboration. Among the various projects funds were requested for research, training, equipment, technical assistance, and institutional (or organizational) support. Some projects involved collaboration between only one or two established researchers, while others involved research teams consisting of at least four established scientists. In some projects virtually all of the requested funds have been or will be spent in Canada while in others the requested funds have been or will be spent in a developing country. Some of the projects have gone on for a number of years (Phase I, II, or III etc.) while others are single phase projects.

The data compiled in this report give a breakdown on each project with respect to the amount of money budgeted to various activities. These activities include research, training, purchase of equipment, technical assistance and institutional support. Estimates of the amount of financial support provided by participating institutions is also provided. Each project has been classified according to the origin of the project. That is, did the project arise as a consequence of individual or institutional initiative, previous collaboration between researchers or as a result of previous IDRC support of the project or of a related project. Each project has also been classified with respect to the nature of the cooperativity involved. For example, did the project involve more than two or less than two established researchers at both the Canadian institution and the institution in the developing country? Is there a two-way exchange of research information and training of personnel? Is the project a one-way exchange involving a form of technical assistance or institutional support? Is research of a cooperative nature being done in both Canada and in the developing country? Is there a good plan for the exchange of ideas, information and research results?

In a truly cooperative program the following criteria should be satisfied: the research team in both Canada and the developing country will consist of one or more established researchers. There will be a good research plan which involves the participation and cooperation of members of both research teams. The research proposed may involve some training and the purchase of equipment but should not be a type of technical assistance. The project should enhance

the research capability of the developing country and also be of benefit to Canada. There should be an exchange of ideas, results, information and personnel each way, that is a two-way exchange cooperative program.

In order to assess the nature of the cooperativity in each of these projects, the projects were assigned a cooperativity rating index. The index ranges from 0 to 1.00. For a truly cooperative program, that is one which meets the criteria outlined above, the cooperativity rating index equals 0.50. A project with a very low index or a very high index means that the research plan does not meet all of the criteria identified above and is unlikely to enhance the research capability of the recipient institution in the developing country. Projects assigned a very high cooperativity rating index will likely be a project which consists of a form of technical assistance or institutional support with little or no exchange as defined above. The cooperativity rating index also gives a measure of the proportion of funds to be spent in Canada and in the developing country. In general, a higher index means that a higher proportion of the budgeted funds will be spent in Canada than in the developing country. Conversely, a lower index means that a higher proportion of the budgeted funds will be spent in the developing country than in Canada.

While analysis of the project summaries provided a great deal of useful information, it seemed important to discuss the programs and projects with the the appropriate vice-presidents and directors of divisions. Accordingly, discussions were held with representatives from each division. The following individuals were interviewed:

- Dr. Jim Mullin, Vice-President, Collaborative and Information Programs Division
- Dr. Mousseau Tremblay, Director, Cooperative Programs Division
- Rachel Des Rosiers, Deputy Director, Cooperative Programs Division
- Dr. Bob Huggan, Associate Director, Communications Division
- Mrs. Martha Stone, Director, Information Sciences Division
- Gerry Bourrier, Director, Fellowships and Awards Division
- Dr. Joe Hulse, Vice-President, Research Programs
- Dr. Hubert Zandstra, Director, Agriculture, Food and Nutrition Sciences Division (AFNS)
- Gilles Lessard, Deputy Director, (AFNS)
- Mike Loevinsohn, Program Officer, (AFNS)
- Marcel Zollinger, Program Officer, (AFNS)
- Don Sharp, Associate Director, Water Supply and Sanitation, Health Sciences Division
- Dr. Carl Smith, Associate Director, Maternal and Child Health, Health Sciences Division
- Bob Hertzog, Assistant Director, Operations, Health Sciences Division
- Gordon MacNeil, Acting Deputy Director, Social Sciences Division
- Terry Smutylo, Senior Planning Officer, Office of Planning and Evaluation

ANALYSIS OF THE PROJECTS

Number and Classification of Projects

The project summaries of 179 projects were reviewed. The projects were classified according to the headings shown in Tables 1 to 7. The cooperative program alone funded 81 projects which were classified as follows: Earth Sciences - 21, Energy - 2, Technology for Local Enterprises - 14, Institutional Support - 7, and Other Fields - 37. These projects collectively account for 45% of the total.

The Cooperative Programs Division in collaboration with other divisions or other units funded the following numbers of projects: AFNS - 41, Social Sciences - 24, Health Sciences - 12, Fellowship and Awards Division - 6, Communications Division - 4, and Informational Sciences Division - 11. These 98 projects collectively account for 55% of the total number of projects.

Tables 1 to 7 identify the projects by file number, show the category of expenditures in each project and the total amount of funds budgeted for the project and the cooperativity rating index for each project. Tables 1 to 7 also list the amount of monies provided by the recipient institutions for each project.

Tables 1A to 7A identify the projects by file number and give an indication of how the project originated and the nature of the cooperativity involved. For easy comparison the cooperativity rating index is also shown on these pages. The tables should be examined in parallel. That is, Table 1 and Table 1A go together, Table 2 and 2A go together and so on.

Headings Used in Tables 1 to 7 (Pages 5 to 17)

Project No. - Cooperative Programs Division file number.

Category of Expenditure - These items were obtained from the budget summaries.

Research includes costs of the actual research, infrastructure costs, rental of facilities, support services, travel costs, per diem allowances, workshops, seminars, and colloquium expenses.

Training includes items identified as expenditures for training. It was not always possible to identify from the budget summaries the actual costs involved in training even though the project contained a training component.

Equipment Costs were obtained from the budget summaries.

Amounts described as technical assistance were sometimes obtained from the budget summaries and in other cases were identified as such from a description of the project.

Institutional Support includes expenditures for items such as support of the Secretariat for International Development, the Canadian Area Specific Learned Societies, or the CASAFA Secretariat.

Total Amount - The amounts are shown in thousands of dollars. It should be noted that the total budgeted amount shown in these tables may not agree with the totals shown in the project application for the following reasons: In some cases contingency estimates could not be allocated with any accuracy between expenditures in Canada and expenditures in the developing country. In such cases the contingency sums were not included in the totals. In some cases there was not a clear distinction between IDRC funds committed for expenses in the Canadian institution and for expenses in the developing country.

Non-Canadian Recipient Contribution and Canadian Recipient

Contribution - These amounts were obtained from the budget summaries. The letter "K" denotes that support was given in kind. It should be noted that the amounts shown in these two columns are sometimes estimates only.

Cooperativity Rating Index - The index was defined in the introduction. The value ranges from 0 to 1.00. An index of 0.50 indicates a truly cooperative project which meets the criteria identified above and is essentially a 50-50 sharing between Canada and the developing country.

Headings Used in Tables 1A to 7A (Pages 6 to 18)

Project No. - Cooperative Programs Division file number.

Origin of Project - The origin of each project was identified as having arisen as a result of individual or institutional initiative, from previous collaboration between researchers or from previous IRDC support of this project or a related project. It was not always possible to determine clearly which was the more significant factor and in some cases more than one factor was involved.

Nature of the Cooperativity - All projects were classified with respect to the type of exchange which was planned or anticipated in the project. In projects in which there was a two-way exchange of information, personnel, or research results the projects were sub-classified according to whether there was one or two established researchers involved at each end or alternatively whether there was at least two established researchers involved at each end (three to four persons). Projects in which there was little or no exchange were also classified according to whether there was more than two or less than two established researchers involved in each team. It should be noted that it was not always possible to determine from the project summaries just exactly how many established researchers were involved.

Cooperativity Rating Index - The index was defined in the introduction. Range 0 to 1.00.

TABLE 1 COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
<u>Earth Sciences</u>									
81-1012	30	246	---	30	---	306	---	19	0.75
82-1003	100	13	28	---	---	141	K	K	0.35
83-1002	335	---	111	---	---	446	81	84	0.40
83-1018	284	---	---	---	---	284	150	213	0.47
83-1020	310	---	62	---	---	372	810	155	0.37
83-1021	37	300	---	36	---	373	0	0	0.75
84-1008	65	---	23	---	---	88	167	48	0.49
84-1017	362	---	52	---	---	414	122	332	0.64
84-1026	65	---	21	---	---	86	K	K	0.52
84-1040	287	---	---	---	---	287	72	83	0.47
84-1041	82	---	41	---	---	123	55	81	0.42
84-1044	249	---	---	---	---	249	152	69	0.63
84-1045	88	---	9	---	---	97	40	52	0.54
84-1056	55	---	35	---	---	90	14	65	0.51
85-1005	283	27	17	---	---	327	227	88	0.43
85-1023	199	---	25	---	---	224	107	82	0.42
85-1032	12	13	29	40	---	94	44	32	0.90
85-1039	214	---	16	---	---	230	119	48	0.40
85-1040	230	---	32	---	---	262	14	11	0.40
85-1041	184	---	49	---	---	233	44	64	0.42
85-1042	253	12	48	---	---	313	17	49	0.60
<u>Energy</u>									
82-1009	205	---	129	205	---	539	154	---	0.78
85-1036	144	115	72	144	---	475	440	74	0.76
SUBTOTALS 4,073 726 799 455 6,053									

TABLE 1A COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
<u>Earth Sciences</u>								
81-1012		X					X	0.75
82-1003		X			X			0.35
83-1002			X		X			0.40
83-1018	X		X		X			0.47
83-1020	X				X			0.37
83-1021			X				X	0.75
84-1008		X		X				0.49
84-1017		X	X		X			0.64
84-1026		X			X			0.52
84-1040	X			X				0.47
84-1041	X				X			0.42
84-1044		X			X			0.63
84-1045	X			X				0.54
84-1056	X				X			0.51
85-1005	X				X			0.43
85-1023					X			0.42
85-1032		X	X			X		0.90
85-1039	X		X		X			0.40
85-1040		X			X			0.40
85-1041	X		X		X			0.42
85-1042	X		X		X			0.60
<u>Energy</u>								
82-1009	X		X				X	0.78
85-1036	X		X				X	0.76

TABLE 1 Continued COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
<u>Technology for Local Enterprises</u>									
81-1009	169	---	---	61	---	230	---	---	0.78
83-1016	24	---	---	75	---	99	10	22	0.80
84-1048	119	---	---	---	---	119	39	29	0.74
85-1006	208	---	17	---	---	225	157	63	0.28
85-1016	160	19	63	27	---	269	287	41	0.30
85-1019	217	73	9	---	---	299	115	105	0.23
85-1020	297	20	145	---	---	462	457	65	0.54
85-1024	104	---	---	240	---	344	52	107	0.80
85-1029	110	---	22	---	---	132	66	24	0.52
85-1033	262	---	---	---	---	262	47	42	0.56
85-1035	182	18	60	---	---	260	291	67	0.37
85-1037	261	10	43	---	---	314	77	47	0.39
86-1003	79	---	16	---	---	95	60	20	0.33
86-1008	78	---	20	---	---	98	50	13	0.35
<u>Institutional Support</u>									
81-1003	---	---	---	---	10	10	---	---	1.00
81-1017	---	---	---	---	46	46	---	---	1.00
82-1021	---	---	---	---	56	56	---	---	1.00
84-1010	---	---	---	---	63	63	---	---	1.00
84-1051	---	---	---	---	94	94	---	---	1.00
84-1052	---	---	---	---	67	67	---	---	1.00
86-1010	---	---	---	---	72	72	---	---	1.00
SUBTOTALS 2,270 140 395 403 408 3,616									

TABLE 1A Continued COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
<u>Technology for Local Enterprises</u>								
81-1009	X		X			X		0.78
83-1016			X			X		0.80
84-1048		X					X	0.74
85-1006		X		X				0.28
85-1016		X		X				0.30
85-1019			X		X			0.23
85-1020	X			X				0.54
85-1024	X					X		0.80
85-1029	X			X				0.52
85-1033	X		X		X			0.56
85-1035	X				X			0.37
85-1037	X				X			0.39
86-1003		X			X			0.33
86-1008		X				X		0.35
<u>Institutional Support</u>								
81-1003			X			X		1.00
81-1017			X			X		1.00
82-1021			X			X		1.00
84-1010			X			X		1.00
84-1051			X			X		1.00
84-1052			X			X		1.00
86-1010			X			X		1.00

TABLE 1 Continued COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
<u>Other Fields</u>									
81-1007	---	88	---	---	---	88	0	0	0.65
81-1014	60	---	17	---	---	77	K	---	0.60
82-1010	265	39	---	---	---	304	82	201	0.61
82-1011	162	81	---	---	---	243	K	K	0.60
82-1012	240	---	---	118	---	358	28	77	0.43
82-1016	310	---	4	---	---	314	112	219	0.32
82-1017	69	---	34	---	---	103	K	109	0.67
82-1022	40	---	12	---	---	52	16	4	0.36
83-1003	216	53	37	---	---	306	K	143	0.46
83-1017	333	---	---	---	---	333	K	47	0.59
83-1019	156	---	41	---	---	197	53	23	0.17
83-1026	294	105	192	---	---	591	509	338	0.30
83-1027	101	---	13	---	---	114	191	35	0.56
84-1001	354	25	127	---	---	506	168	61	0.51
84-1003	352	60	21	---	---	433	57	308	0.70
84-1007	73	---	12	---	---	85	K	K	0.36
84-1014	181	---	40	---	---	221	9	71	0.60
84-1016	227	---	145	---	---	372	249	81	0.20
84-1027	79	---	55	70	---	204	12	38	0.51
84-1028	320	---	---	---	---	320	84	58	0.46
84-1030	159	---	48	---	---	207	307	K	0.23
84-1031	231	---	84	---	---	315	114	84	0.31
84-1032	147	---	42	---	---	189	34	18	0.44
84-1034	157	---	56	---	---	213	170	90	0.38
84-1037	156	---	76	---	---	232	35	11	0.25
84-1038	87	---	10	---	---	97	31	23	0.57
84-1039	152	---	80	---	---	232	92	32	0.61
84-1047	110	---	---	---	---	110	44	33	0.20
84-1057	79	---	---	---	---	79	52	42	0.41
85-1002	96	---	---	---	---	96	12	13	0.29
85-1008	303	---	---	---	---	303	113	84	0.33
85-1013	143	20	30	21	---	214	53	39	0.70
85-1015	151	26	62	26	---	265	211	---	0.25
85-1018	150	---	32	20	---	202	111	58	0.26
85-1034	223	---	37	---	---	260	77	81	0.31
85-1038	412	---	92	---	---	504	K	K	0.50
86-1007	395	---	---	---	---	395	15	125	0.60
SUBTOTALS	6,983	497	1,399	255		9,134			
TOTALS	13,326	1,363	2,593	1,113	408	18,803			

TABLE 1A Continued COOPERATIVE PROGRAMS DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
<u>Other Fields</u>								
81-1007	X		X				X	0.65
81-1014		X					X	0.60
82-1010		X			X			0.61
82-1011		X			X			0.60
82-1012		X	X		X			0.43
82-1016		X		X				0.32
82-1017		X		X				0.67
82-1022	X		X		X			0.36
83-1003		X			X			0.46
83-1017			X		X			0.59
83-1019	X			X				0.17
83-1026	X		X		X			0.30
83-1027			X		X			0.56
84-1001		X			X			0.51
84-1003	X		X		X			0.70
84-1007		X		X				0.36
84-1014		X			X			0.60
84-1016		X					X	0.20
84-1027		X	X		X			0.51
84-1028	X		X		X			0.46
84-1030		X		X				0.23
84-1031	X		X		X			0.31
84-1032	X				X			0.44
84-1034		X		X				0.38
84-1037		X		X				0.25
84-1038		X			X			0.57
84-1039			X		X			0.61
84-1047		X					X	0.20
84-1057			X	X				0.41
85-1002	X		X	X				0.29
85-1008	X				X			0.33
85-1013	X						X	0.70
85-1015	X		X	X				0.25
85-1018	X		X	X				0.26
85-1034	X		X		X			0.31
85-1038	X		X		X			0.50
86-1007	X				X			0.60

TABLE 2 COOPERATIVE PROGRAMS AND AFNS DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
81-1001	163	71	---	---	---	234	0	K	0.75
81-1004	138	---	---	---	---	138	0	0	1.00
81-1005	---	60	---	100	---	160	---	---	1.00
81-1016	---	---	---	---	38	38	---	---	1.00
81-1018	---	---	---	31	---	31	0	11	0.85
82-1001	28	---	16	133	---	177	0	---	0.80
82-1002	41	---	5	124	---	170	0	K	0.80
82-1005	---	---	---	80	---	80	0	K	0.90
82-1014	---	---	---	17	---	17	0	K	1.00
82-1015	292	5	36	---	---	333	167	K	0.49
83-1004	---	---	---	19	---	19	---	24	1.00
83-1010	---	---	---	328	---	328	---	80	1.00
83-1011	234	---	73	---	---	307	25	48	0.53
83-1012	207	---	72	---	---	279	36	30	0.52
83-1022	---	---	---	---	71	71	---	---	1.00
83-1031	288	17	32	---	---	337	K	K	0.49
83-1032	148	6	49	---	---	203	K	K	0.17
84-1006	324	11	48	---	---	383	52	113	0.43
84-1012	97	---	---	---	---	97	27	0	0.50
84-1019	429	9	30	---	---	468	123	92	0.38
84-1020	393	49	41	---	---	483	K	K	0.61
84-1035	476	83	89	---	---	648	K	26	0.57
84-1042	34	5	7	101	---	147	K	K	0.94
84-1043	187	---	29	---	---	216	---	---	0.33
84-1050	364	26	44	---	---	434	---	---	0.50
84-1053	---	43	---	43	---	86	---	K	0.75
84-1054	21	11	---	65	---	97	---	K	0.85
84-1055	77	---	22	---	---	99	K	K	0.55
84-1058	62	24	10	---	---	96	K	K	0.46
85-1007	118	---	31	---	---	149	45	K	0.34
85-1010	352	37	13	---	---	402	373	K	0.28
85-1012	---	---	---	97	---	97	K	K	1.00
85-1017	---	10	7	14	---	31	---	24	0.90
85-1045	238	---	35	---	---	273	K	K	0.42
85-1046	418	30	31	---	---	479	180	107	0.33
85-1047	272	79	72	---	---	423	465	K	0.34
85-1048	466	---	44	---	---	510	252	K	0.50
85-1049	57	---	12	174	---	243	K	K	0.80
85-1050	336	---	52	---	---	388	K	196	0.48
85-1051	500	47	20	---	---	567	240	179	0.36
86-1001	76	---	12	---	---	88	2	K	0.69
TOTALS	6,836	623	932	1,326	109	9,826			

TABLE 2A COOPERATIVE PROGRAMS AND AFNS DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
81-1001		X	X			X		0.75
81-1004		X	X			X		1.00
81-1005	X	X				X		1.00
81-1016	X					X		1.00
81-1018	X		X			X		0.85
82-1001	X	X	X			X		0.80
82-1002		X	X			X		0.80
82-1005			X			X		0.90
82-1014		X	X			X		1.00
82-1015		X	X	X				0.49
83-1004			X			X		1.00
83-1010			X			X		1.00
83-1011		X		X				0.53
83-1012	X				X			0.52
83-1022			X			X		1.00
83-1031	X			X				0.49
83-1032		X		X				0.17
84-1006		X	X	X				0.43
84-1012	X	X			X			0.50
84-1019		X	X		X			0.38
84-1020		X	X		X			0.61
84-1035		X	X		X			0.57
84-1042		X	X			X		0.94
84-1043		X			X			0.33
84-1050			X		X			0.50
84-1053		X	X			X		0.75
84-1054		X	X			X		0.85
84-1055		X	X	X				0.55
84-1058		X		X				0.46
85-1007		X			X			0.34
85-1010	X		X	X				0.28
85-1012	X	X				X		1.00
85-1017	X		X			X		0.90
85-1045	X		X		X			0.42
85-1046		X	X		X			0.33
85-1047		X	X		X			0.34
85-1048		X	X		X			0.50
85-1049			X			X		0.80
85-1050	X	X			X			0.48
85-1051		X			X			0.36
86-1001			X			X		0.69

TABLE 3 COOPERATIVE PROGRAMS AND SOCIAL SCIENCES DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
81-1010	25	---	---	---	---	25	3	10	0.80
81-1015	251	---	---	---	---	251	391	150	0.51
82-1004	72	---	---	---	---	72	13	28	0.42
82-1007	---	---	---	---	105	105	5	---	1.00
82-1018	---	---	---	---	72	72	4	---	1.00
82-1019	---	---	---	---	76	76	---	---	1.00
82-1020	80	17	---	---	---	97	K	K	0.67
83-1005	95	---	---	---	---	95	116	47	0.31
83-1008	179	---	---	---	---	179	69	0	0.36
83-1009	140	---	30	---	---	170	56	64	0.68
83-1013	26	---	---	---	---	26	10	35	0.50
83-1028	367	---	31	---	---	398	22	22	0.45
83-1030	320	---	---	---	---	320	69	165	0.49
83-1033	64	---	---	---	---	64	---	---	0.37
84-1004	267	---	---	---	---	267	K	K	0.48
84-1005	328	---	---	---	---	328	---	118	0.50
84-1021	166	---	---	---	---	166	100	59	0.35
84-1025	355	---	---	---	---	355	527	---	0.40
84-1036	417	---	---	---	---	417	61	36	0.38
85-1001	72	6	18	---	---	96	12	18	0.40
85-1011	160	---	15	---	---	175	K	K	0.67
85-1026	249	14	2	---	---	265	33	117	0.27
86-1005	139	---	12	---	---	151	11	23	0.45
86-1006	270	---	---	---	---	270	44	60	0.29
TOTALS	4,042	37	108		253	4,440			

TABLE 3A COOPERATIVE PROGRAMS AND SOCIAL SCIENCES DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
81-1010		X				X	0.80	
81-1015		X			X		0.51	
82-1004		X			X		0.42	
82-1007			X			X	1.00	
82-1018			X			X	1.00	
82-1019			X			X	1.00	
82-1020		X			X		0.67	
83-1005		X			X		0.31	
83-1008	X		X		X		0.36	
83-1009	X			X			0.68	
83-1013	X			X			0.50	
83-1028	X			X			0.45	
83-1030		X			X		0.49	
83-1033	X			X			0.37	
84-1004	X		X		X		0.48	
84-1005	X		X		X		0.50	
84-1021		X			X		0.35	
84-1025			X		X		0.40	
84-1036		X			X		0.38	
85-1001		X	X		X		0.40	
85-1011		X	X		X		0.67	
85-1026		X			X		0.27	
86-1005			X		X		0.45	
86-1006		X			X		0.29	

TABLE 4 COOPERATIVE PROGRAMS AND HEALTH SCIENCES DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
81-1002	---	---	3	27	---	30	7	9	0.85
82-1008	---	12	3	23	---	38	8	22	0.82
82-1013	241	---	29	---	---	270	169	129	0.43
83-1006	377	---	47	---	---	424	94	0	0.50
83-1024	58	---	---	---	---	58	3	23	0.44
83-1025	58	---	45	---	---	103	2	14	0.33
83-1029	104	---	20	---	---	124	14	8	0.61
85-1022	184	16	36	---	---	236	30	15	0.37
85-1025	136	21	43	---	---	200	412	31	0.26
85-1030	500	47	20	---	---	567	419	35	0.35
85-1043	225	30	50	---	---	305	153	53	0.33
86-1002	162	---	59	---	---	221	44	141	0.48
TOTALS	2,045	126	355	50		2,576			

TABLE 5 COOPERATIVE PROGRAMS AND FAD DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
83-1014	---	250	---	---	---	250	0	0	0.75
84-1023	---	450	---	---	---	450	0	0	0.75
85-1009	---	240	---	---	---	240	0	0	0.75
85-1021	---	450	---	---	---	450	0	0	0.75
86-1004	---	250	---	---	---	250	0	0	0.75
86-1009	---	250	---	---	---	250	0	0	0.75
TOTALS		1,890				1,890			

TABLE 4A COOPERATIVE PROGRAMS AND HEALTH SCIENCES DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
81-1002		X				X		0.85
82-1008			X			X		0.82
82-1013		X		X				0.43
83-1006			X		X			0.50
83-1024		X		X				0.44
83-1025		X			X			0.33
83-1029		X			X			0.61
85-1022			X		X			0.37
85-1025	X						X	0.26
85-1030	X				X			0.35
85-1043		X			X			0.33
86-1002		X	X		X			0.48

TABLE 5A COOPERATIVE PROGRAMS AND FAD DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
83-1014			X			X		0.75
84-1023			X			X		0.75
85-1009			X			X		0.75
85-1021			X			X		0.75
86-1004			X			X		0.75
86-1009			X			X		0.75

TABLE 6 COOPERATIVE PROGRAMS AND COMMUNICATIONS DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
83-1023	---	---	---	---	50	50	---	---	1.00
84-1011	---	64	---	---	---	64	7	0	0.70
85-1028	---	77	---	---	---	77	27	0	0.70
85-1031	---	31	---	---	---	31	2	K	0.75
TOTALS		172			50	222			

TABLE 7 COOPERATIVE PROGRAMS AND INFORMATION SCIENCES DIVISION PROJECTS

Project No.	Category of Expenditures					Total Amount (\$000)	Non-Cdn. Recipient Contrib.	Cdn. Recipient Contrib.	Cooperativity Rating Index
	Research	Training	Equip.	Tech. Assist.	Instit. Support				
81-1008	---	---	---	---	89	89	50	0	1.00
84-1002	217	---	---	---	---	217	K	K	0.60
84-1009	---	---	---	---	95	95	---	45	1.00
84-1022	126	---	207	---	---	333	226	0	0.60
84-1024	---	---	---	---	200	200	---	14	1.00
84-1046	---	---	34	---	29	63	K	K	0.95
84-1049	272	---	26	---	---	298	123	72	0.50
85-1003	96	---	22	---	---	118	K	K	0.30
85-1044	93	---	90	---	---	183	168	---	0.40
85-1052	---	---	---	---	75	75	12	K	0.75
86-1012	79	---	---	---	---	79	9	9	0.43
TOTALS	883		379		488	1,750			
GRAND TOTALS	27,132	4,211	4,367	2,489	1,308	39,507			

TABLE 6A COOPERATIVE PROGRAMS AND COMMUNICATIONS DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
83-1023	X					X		1.00
84-1011	X		X		X			0.70
85-1028	X		X		X			0.70
85-1031		X		X				0.75

TABLE 7A COOPERATIVE PROGRAMS AND INFORMATION SCIENCES DIVISION PROJECTS

Project No.	Origin of Project			Nature of the Cooperativity				Cooperativity Rating Index
	Individ. or Instit. Initiative	Previous Collab.	Previous IDRC Support	Two-Way Exchange		Little or No Exchange		
				1-2 Pers.	3-4 Pers.	1-2 Pers.	3-4 Pers.	
81-1008		X	X			X		1.00
84-1002			X		X			0.60
84-1009			X			X		1.00
84-1022		X	X		X			0.60
84-1024	X					X		1.00
84-1046	X		X			X		0.95
84-1049		X			X			0.50
85-1003	X				X			0.30
85-1044	X				X			0.40
85-1052		X	X		X			0.75
86-1012	X		X		X			0.43

**TABLE 8 COMPARISON OF BUDGETED AMOUNTS SHOWN IN EACH CATEGORY
OF EXPENDITURE (TABLES 1 TO 7) AMONG THE VARIOUS GROUPS OF PROJECTS**

Project Group	Category of Expenditure					Group Total (\$000)
	Research	Training	Equipment	Tech. Assist.	Instit. Support	
COOP DIV.	13,326 (70.9%)	1,363 (7.25%)	2,593 (13.8%)	1,113 (5.92%)	408 (2.17%)	18,803 (47%)
COOP & AFNS	6,836 (69.6%)	623 (6.34%)	932 (9.49%)	1,326 (13.5%)	109 (1.11%)	9,826 (24.8%)
COOP & SOCIAL SCI.	4,042 (91.0%)	37 (0.83%)	108 (2.43%)	—	253 (5.70%)	4,440 (11%)
COOP & HEALTH SCI.	2,045 (79.4%)	126 (4.89%)	355 (13.8%)	50 (1.94%)	—	2,576 (6.5%)
COOP & FAD	—	1,890 (100%)	—	—	—	1,890 (4.7%)
COOP & COMMUNICATIONS	—	172 (77.5%)	—	—	50 (22.5%)	222 (4.8%)
COOP & INFO. SCI.	883 (50.4%)	—	379 (21.7%)	—	488 (27.9%)	1,750 (4.4%)
GRAND TOTALS	27,132 (68.7%)	4,211 (10.7%)	4,367 (11.0%)	2,489 (6.30%)	1,308 (3.30%)	39,507

**TABLE 9 DISTRIBUTION OF PROJECTS WITH A GIVEN COOPERATIVITY RATING INDEX
WITHIN THE VARIOUS GROUPS OF PROJECTS**

Cooperativity Rating Index Range	Projects (Tables 1 to 7)						
	1 COOP	2 COOP & AFNS	3 COOP & SOC. SCI.	4 COOP & HEALTH SCI.	5 COOP & FAD	6 COOP & COMMUN.	7 COOP & INFO. SCI.
0.9 - 1.00	8	11	3	0	0	1	4
0.8 - 0.89	2	5	1	2	0	0	0
0.7 - 0.79	8	2	0	0	6	3	1
0.6 - 0.69	11	2	3	1	0	0	2
0.5 - 0.59	12	7	3	1	0	0	1
0.4 - 0.49	15	6	7	3	0	0	2
0.3 - 0.39	15	6	5	4	0	0	1
0.2 - 0.29	9	1	2	1	0	0	0
0.1 - 0.19	1	1	0	0	0	0	0
TOTALS	81	41	24	12	6	4	11
0.3 - 0.69	53 (65%)	21 (51%)	18 (75%)	9 (75%)	0	0	6 (55%)

ANALYSIS OF TABLE 8

Table 8 shows a comparison of the budgeted amounts identified in each category of expenditure (Tables 1 to 7) among the various groups of projects.

The proportion of money budgeted (group totals) among the various groups parallels the proportion of projects funded within each group. For example, the C00P Division alone accounts for 47% (\$18,803,000) and was responsible for 45% of the projects (81 out of 179). The C00P - AFNS Group accounts for 24.8% (\$9,826,000) of the money and is responsible for 22.9% of the projects.

Within each group of projects approximately 70% of the funds are allocated for research expenditures. This percentage is considerably higher (91%) in the C00P - Social Sciences projects. In these cases there is little money budgeted for training and the purchase of equipment. In the C00P - Information Sciences group only 50% of the funds have been budgeted for research expenditures and the remainder is allocated for equipment and institutional support.

Overall, approximately 69% of the budgeted funds are for research, 11% for training, 11% for the purchase of equipment, 6% for technical assistance and 3% for institutional support (18 projects).

ANALYSIS OF TABLE 9

Table 9 shows the number of projects in each group which fall within a given range of values for the cooperativity rating index. For the purpose of analysis consider the number of projects which have a cooperativity rating index within the selected range of values from 0.3 to 0.69.

Column 1 - From Column 1 it is apparent that nearly two-thirds (65%) of the projects fall within this range. There are eight projects with a very high index (0.9 to 1.0). It should be noted that seven of these eight projects comprise the group of projects which consist of support of institutions or organizations (refer to Table 1 and 1A, Page 7 and 8). For example, projects 81-1017, 82-1021, 84-1010, 84-1051, 84-1052, and 86-1010 are all projects which involve support of the Secretariat for International Development. If one corrects the data by excluding these seven projects, the percentage of projects with an acceptable index increases to 73%.

Column 2 - From Column 2 it is clear that 51% of the projects fall within the selected range of values. Closer inspection of this group of projects reveals that a large number (16 or 39%) have a high index (0.8 to 1.0) because they represent a form of technical assistance or institutional support and show little if any cooperativity as defined in this study (see Table 2 and 2A). For example, in projects 82-1001, 82-1002, 82-1005, 83-1004, 83-1010, and 85-1012 there is no cooperativity. All the research is done at a Canadian Institution.

Supporting these projects does increase and enhance Canadian research capability and may eventually provide information for technology needed by a developing country. Projects 81-1016 and 83-1022 represent support of CASAFA.

Column 3 - From Column 3 it can be seen that 75% of the projects fall within the selected range of values. Three projects (13%) have an index of 1.00. These projects (82-1007, 82-1018, and 82-1019) represent support of an organization or institution (Canadian Area Specific Learned Societies).

Column 4 - From Column 4 it is clear that nine of the projects (75%) fall within the selected range. The two projects with larger indices (0.85 and 0.82) are projects which constitute technical assistance with little or no exchange, and show poor cooperativity.

Column 5 - These six projects are all training projects and for this reason have a high cooperativity rating index. The primary purpose of these projects is to increase the awareness of Canadian graduate students with respect to real or potential research problems in a developing country. As such, there is little if any cooperativity or exchange as defined in this study.

Column 6 - All of these projects were assigned a high cooperativity rating index. One project represents institutional support (University of Toronto Press) while the other three are training projects.

Column 7 - From the data it is clear that six of these projects (55%) fall within the selected range of values. Four of the projects (36%) represent the direct support of organizations or institutions with little or no cooperativity as defined in this study.

CONCLUDING REMARKS

The objects and powers of the Centre as defined in the International Development Research Centre Act are very broad and in a sense cover any research activity which encourages, supports and sustains International Development. Research funds dispersed by the Centre are clearly not intended to serve as another source of grant support solely for the enhancement of Canadian research capability. It is also obvious, that given finite financial and human resources, the Board of Governors of the IDRC has had to make hard decisions with respect to the types of programs and projects which would be considered eligible for support.

For most research projects, one can discern four distinct aspects of the overall project. Stage 1 consists of defining the actual objectives or problem to be solved. Stage 2 involves assembling the research teams and training additional personnel where necessary. Stage 3 involves doing the research, collecting the data and analyzing the results. Stage 4 is concerned with application of the research results or putting in place the solution to the problem. Depending on the stage to which a particular project has progressed, you may conclude that the project involves only training or technical assistance. For example, the AFNS

division has a history of supporting projects at Canadian universities which have a high potential for the transfer of results or technology to a developing country. In many cases there has been no alternative but to do the research and training of personnel in Canada because the facilities and laboratories simply do not exist in the developing country. At first glance such projects might appear to be a form of technical assistance. However, when the project eventually is completed and the results have been transferred to the developing country it is clear in most cases that the project is beneficial and will enhance the research capacity of the developing country. Projects must be selected which will increase the research capability of a developing country or provide a technology of practical utility in a developing country. The question still arises as to whether it is better to train people to do the work in Canada or to send funds abroad for training and research. It would appear that each project must be considered on its own merits. It is difficult to adopt a single strategy which can be applied to cover all projects in all countries. One mode of collaboration may be highly desirable and beneficial for a particular project whereas for a second project an entirely different mode of collaboration may be required.

From an overall viewpoint (see Analysis of Table 8) it is apparent that about 69% of the budgeted funds are for research, 11% for training, 11% for the purchase of equipment, 6% for technical assistance and 3% for institutional support. There are, of course, differences within the groups of projects and these were discussed in the analysis. The projects involving institutional support do not meet the objectives of the cooperative programs and hence have an unacceptably high index. Although these projects account for only 3.3% of the budgeted funds they represent 10% of the projects (18 out of 179).

The COOP-FAD projects represent training programs. These projects are always related to an IDRC supported project. The best approach appears to be to bring a group of people to Canada for a short course consisting of a few weeks rather than for degree programs. For long term planning degree programs are a necessity in order to increase the cadre of research trained personnel in the developing country. The Young Canadian Researchers program should increase the awareness of Canadians to needs and research projects in the developing world. With respect to the FAD Health Exchange Program, one wonders whether the activity and level of support coincides with the Health Science Division's view of how best to encourage and support health research and training with respect to International Development. It is premature to judge how effective the Young Canadian Researchers program has been with respect to encouraging and motivating award holders to become engaged in International Development.

One of the objectives of the COOP Program is to enhance research capability in the developing country. Many excellent projects have been funded during the last five years. In many cases however there does not seem to be any mechanism in place to ensure that the results of the research will be utilized in the developing country. In other words, who bridges the gap between doing the research and ensuring that the research results are applied and benefit the people in the developing country? The delivery of the results or the application depends of course on the

priorities of the local government and the recipient institutions. The Communications Division seems an appropriate vehicle by which to disseminate information. One wonders whether more resources ought to be put into ensuring that results of research are applied and put in place to benefit the developing country, rather than simply putting more resources into pure research. In many developing countries there is no infrastructure in place and no communication system in place to ensure that the local population is made aware of and is educated in the use of the new found research knowledge. Even projects which have a high degree of cooperativity in so far as the research is concerned give no assurance that the product will be delivered to the group which is in need of the research information. Perhaps a product delivery group should be put in place for each division.

Support for organizations such as the Secretariat for International Development and the CASLS does not increase the research capability of a developing country and shows little if any cooperativity. Projects which involve a high degree of technical assistance again do not accomplish the mandate of the Cooperative Programs Division.

There does not appear to be any correlation between the amount of support provided by the Canadian institution or the recipient institution and the cooperativity rating index. This is probably because the numbers are often estimates and represent support in kind.

To ensure that the results are needed and will be of benefit to the developing country, it is essential that the initial idea for the research project should come from an individual or an institution in the developing country. This ensures that funding the project is not simply a mechanism to enhance the research capability of a Canadian research group but should enhance the research capacity and increase the number of trained researchers in a developing country.